

Set	Items	Description
S1	3128	LONG()ELEMENT? ?()METHOD OR LEM
S2	1124058	(SQUARE OR MULTIPLY(2W)SELF OR MULTIPLY()BY()ITSELF)
S3	8562995	(LENGTH? ? OR SPAN? ? OR SPAN? ? OR INTERVAL? ? OR UNIT? ? OR WIDTH? ? OR DIAMETER? ? OR SIZE? ? OR DIMENSION? ? OR HEIGHT? ? OR MEASUREMENT? ?)
S4	6625129	(SIDE OR EDGE OR DIRECTION OR BORDER OR FACE OR FRONT OR SEGMENT OR PERIMETER OR LATERAL OR HORIZONTAL)
S5	130816	S3(5N)S4
S6	533	S2(5N)S5
S7	0	S1(100N)S6
S8	0	S LONG()ELEMENT()METHOD OR LONG()ELEMENTS()METHOD
S9	10413	S S2(5N)S4
S10	0	S S1(100N)S9
S11	59299	S S2(5N)S3
S12	11	S S1(100N)S11
S13	4	S S12 NOT PY=2001:2007
S14	3	RD (unique items)
S15	3	SORT S14/ALL/PY

- [File 275] Gale Group Computer DB(TM) 1983-2007/Jan 08
- [File 621] Gale Group New Prod.Annou.(R) 1985-2007/Jan 03
- [File 636] Gale Group Newsletter DB(TM) 1987-2007/Jan 08
- [File 16] Gale Group PROMT(R) 1990-2007/Jan 08
- [File 160] Gale Group PROMT(R) 1972-1989
- [File 148] Gale Group Trade & Industry DB 1976-2007/Jan 04
- [File 624] McGraw-Hill Publications 1985-2007/Jan 11
- [File 15] ABI/Inform(R) 1971-2007/Jan 11
- [File 647] CMP Computer Fulltext 1988-2007/Mar W2
- [File 674] Computer News Fulltext 1989-2006/Sep W1

Higher relevance

d

Subject summary

15/3,K/1 (Item 1 from file: 275) [Links](#)

Gale Group Computer DB(TM)

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01548881 **Supplier Number:** 13043981 (Use Format 7 Or 9 For FULL TEXT)

Exploring the FONTMETRICS structure, part 1. (IBM OS/2 2.0 font information) (Environments)

Petzold, Charles

PC Magazine , v11 , n22 , p388(4)

Dec 22 , 1992

ISSN: 0888-8507

Language: ENGLISH **Record Type:** FULLTEXT; ABSTRACT

Word Count: 2893 **Line Count:** 00219

...100, but you'll note that FONTLIST reports it as 98. This is obviously a rounding error.

The use of the letters Em in the IEm Height and IEmInc fields is based on classical typography. This terminology originated when type was only uppercase. The capital M was a **square**, the **height** and **width** of which was equal to the point size. Now the em is considered to be a **square**, its **height** and **width** equal to the point size. Thus for a 12-point font, an em-square (also called an em-quad) is 12 points wide and 12...

15/3,K/2 (Item 2 from file: 16) [Links](#)

Gale Group PROMT(R)

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05404737 **Supplier Number:** 48200168 (USE FORMAT 7 FOR FULLTEXT)

CB on the road in Canada

Sanders, Shari

Children's Business , p 46

Jan , 1998

Language: English **Record Type:** Fulltext

Document Type: Magazine/Journal ; Trade

Word Count: 4321

...the case with many Quebec retailers, the majority of the product mix is home-grown, evidenced by labels like Colimacon, Deux Par Deux, Cocoa, Petit Lem, Orage and Souris Mini.

According to Nia Papanicolopoulou, kids' sales manager and regional buyer for Quebec designers, Le Boie's typical customer is between 25... ...price definitely takes a backseat to fashion," she offers, noting that sales have doubled since spring '97 when concept shops such as Tommy Hilfiger (275 **square** feet for boys' and girls' sizes 8 to 18), Ralph Lauren, FILA, Nike, Levi's and Point Zero were introduced or expanded. "We're trying to make a strong statement as..."

15/3,K/3 (Item 3 from file: 148) [Links](#)

Gale Group Trade & Industry DB

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10039299 **Supplier Number:** 20336620 (USE FORMAT 7 OR 9 FOR FULL TEXT)

CB on the road in Canada. (Children's Business; children's clothing)

Sanders, Shari

Children's Business , v13 , n1 , p46(8)

Jan , 1998

ISSN: 0884-2280

Language: English

Record Type: Fulltext

Word Count: 4621 **Line Count:** 00353

...the case with many Quebec retailers, the majority of the product mix is home-grown, evidenced by labels like Colimacon, Deux Par Deux, Cocoa, Petit Lem, Orage and Souris Mini.

According to Nia Papanicolopoulou, kids' sales manager and regional buyer for Quebec designers, Le Boie's typical customer is between 25... ...price definitely takes a backseat to fashion," she offers, noting that sales have doubled since spring '97 when concept shops such as Tommy Hilfiger (275 **square** feet for boys' and girls' sizes 8 to 18), Ralph Lauren, FILA, Nike, Levi's and Point Zero were introduced or expanded. "We're trying to make a strong statement as..."

Set	Items	Description
S1	122	LONG()ELEMENT()METHOD OR LONG()ELEMENTS()METHOD OR LEM
S2	172606	(SQUARE OR SQUARED OR SQUARING OR (MULTIPLY OR MULTIPLYING OR MULTIPLIED)(2W)(SELF OR ITSELF))
S3	7216416	(LENGTH? ? OR SPAN? ? OR SPAN? ? OR INTERVAL? ? OR UNIT? ? OR WIDTH? ? OR DIAMETER? ? OR SIZE? ? OR DIMENSION? ? OR HEIGHT? ? OR MEASUREMENT? ?)
S4	7084842	(SIDE OR EDGE OR DIRECTION OR BORDER OR FACE OR FRONT OR SEGMENT OR PERIMETER OR LATERAL OR HORIZONTAL)
S5	13167	S2(5N)S3
S6	1	S1(100N)S5
S7	15554	S2(5N)S4
S8	1	S1(100N)S7
S9	1867	S2(5N)(S3(5N)S4)
S10	1	S1(100N)S9
S12	1	S S1 AND S5
S13	0	S S12 NOT PY=2002:2007
S14	1	S S1 AND S7
S15	0	S S14 NOT PY=2002:2007
S16	1	S S1 AND S9
S17	0	S S16 NOT PY=2002:2007
S18	3	S S1 AND S2
S19	0	S S18 NOT PY=2002:2007

[File 347] JAPIO Dec 1976-2006/Sep(Updated 061230)

[File 350] Derwent WPIX 1963-2006/UD=200703

Set	Items	Description
S1	1	LONG()ELEMENT()METHOD OR LONG()ELEMENTS()METHOD
S2	255059	(SQUARE OR SQUARED OR SQUARING OR (MULTIPLY OR MULTIPLYING OR MULTIPLIED)(2W)(SELF OR ITSELF))
S3	0	S1(100N)S2
S4	21	S S2(100N)LEM
S5	10	S S4 NOT PY=2002:2007
S6	10	SORT S5/ALL/PD {none of the "LEM" referred to long element method} – all random hits without reference to squaring a side.

[File 348] EUROPEAN PATENTS 1978-2006/ 200702

[File 349] PCT FULLTEXT 1979-2006/UB=20070111UT=20070104

Set	Items	Description
S1	2752	LONG()ELEMENT? ?()METHOD OR LEM
S2	243658	(SQUARE OR MULTIPLY(2W)SELF OR MULTIPLY()BY()ITSELF)
S3	1818075	(LENGTH? ? OR SPAN? ? OR SPAN? ? OR INTERVAL? ? OR UNIT? ? OR WIDTH? ? OR DIAMETER? ? OR SIZE? ? OR DIMENSION? ? OR HEIGHT? ? OR MEASUREMENT? ?)
S4	1632980	(SIDE OR EDGE OR DIRECTION OR BORDER OR FACE OR FRONT OR SEGMENT OR PERIMETER OR LATERAL OR HORIZONTAL)
S5	337627	S3(5N)S4
S6	3369	S2(5N)S5
S7 1		S1(100N)S6
S8 16972		S S2(5N)S4
S9 1		S S1(100N)S8
S10 1		S S9 NOT PY=2001:2007
S11 27851		S S2(5N)S3
S12 4		S S11(100N)S1
S13 3		S S12 NOT PY=2001:2007
S14 1		S S7 NOT PY=2001:2007

[File 348] EUROPEAN PATENTS 1978-2006/ 200702

[File 349] PCT FULLTEXT 1979-2006/UB=20070104UT=20061228

Subject summary7/3K/1 (Item 1 from file: 349) [Links](#)

PCT FULLTEXT

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00294711

DIFFRACTION VIEWING DEVICE

DISPOSITIF DE VISUALISATION PAR DIFFRACTION

Patent Applicant/Patent Assignee:

● MIKOH TECHNOLOGY LIMITED;

;;

● DUELL Graham;

;;

● BULLOCK Graeme;

;;

● FLYNN Daphne;

;;

● MARTINUZZO Steven;

;;

● STENING Belinda;

;;

● ATHERTON Peter Samuel;

;;

	Country	Number	Kind	Date
Patent	WO	9512860	A1	19950511
Application	WO	94AU674		19941101
Priorities	AU	932200		19931105
	AU	932784		19931206
	AU	932785		19931206
	AU	946630		19940705
	AU	948124		19940915

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Publication Language: English

Filing Language:

Fulltext word count: 2554

Detailed Description:

...shape, although it shou-, be appreciated that other cell shapes are possible. In such embodiments the elliptical spot 200 will preferably be such that the lemt hs of one or both of the axes of the ellipse are comparable with a characteristic dimension of the cells 201.

35 Figure 2 illustrates.... .wherein the elliptical spot 200 is aligned with the cells 201, and the length of the short axis of the ellipse is comparable with the side length of the square cells 201. Such a condition may be important in ensuring that cells from no more than one row or column are

9/3K/1 (Item 1 from file: 349) [Links](#)

PCT FULLTEXT

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00294711

DIFFRACTION VIEWING DEVICE**DISPOSITIF DE VISUALISATION PAR DIFFRACTION****Patent Applicant/Patent Assignee:**

● MIKOH TECHNOLOGY LIMITED;

::

● DUELL Graham;

::

● BULLOCK Graeme;

::

● FLYNN Daphne;

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● MARTINUZZO Steven;

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● STENING Belinda;

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● ATHERTON Peter Samuel;

::

	Country	Number	Kind	Date
Patent	WO	9512860	A1	19950511
Application	WO	94AU674		19941101
Priorities	AU	932200		19931105
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	AU	932785		19931206
	AU	946630		19940705
	AU	948124		19940915

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Publication Language: English

Filing Language:

Fulltext word count: 2554

Detailed Description:

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35 Figure 2 illustrates... ...wherein the elliptical spot 200 is aligned with the cells 201, and the length of the short axis of the ellipse is comparable with the side length of the square cells 201. Such a condition may be important in ensuring that cells from no more than one row or column are

13/3K/1 (Item 1 from file: 349) [Links](#)

PCT FULLTEXT

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00533698

PLANAR ELECTRON Emitter (PEE)
EMETTEUR D'ELECTRONS PLAN

Patent Applicant/Patent Assignee:

- VISCOR Petr;

;;

- NIELSEN Niels Ole;

;;

- DELONG Armin;

;;

- KOLARIK Vladimir;

;;

	Country	Number	Kind	Date
Patent	WO	9965050	A1	19991216
Application	WO	99DK323		19990611
Priorities	US	9888978		19980611

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Publication Language: English

Filing Language:

Fulltext word count: 20063

Detailed Description:

...the surfaces S2 and S3 are properly treated and the regions I and 2 are properly chosen and constructed, the part of the electrical current item 5 (electron emission current) can become quite large in relation to the background current IbackWhen QB semiconductor is properly chosen and prepared, then even without any efforts for optimisation (inclusive the optimisation of the surfaces S2 and S3), item of hundreds of 1 0 nano-Amperes per square centimetre can be measured at electrical fields of the order of some 1 00 Volts/cm (from now on termed as ohmic electric fields), with the total thickness of the device L2 being macroscopic (less than millimetres). With the length scale L1 (square root of the area of the device) being of the order of 30 cm (today's size of silicon wafers for example), the device depicted...

13/3K/2 (Item 2 from file: 349) [Links](#)

PCT FULLTEXT

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00430488

METHOD AND APPARATUS FOR VACUUM DISTILLATION OF SOLVENTS

PROCEDE ET APPAREIL DE DISTILLATION SOUS VIDE DE SOLVANTS

Patent Applicant/Patent Assignee:

- LUBRICATIONS SYSTEMS COMPANY;

;;

- COX Jeffory David;

;;

- MARTIN Robert Grayson;

;;

	Country	Number	Kind	Date
Patent	WO	9820952	A1	19980522
Application	WO	97US21103		19971114
Priorities	US	96748661		19961114

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Publication Language: English

Filing Language:

Fulltext word count: 15419

Detailed Description:

...the primary heat exchanger 15 consists of an ITT Standard SX 2000 steel exchanger with copper inner tubes; it is a two pass (heads) type unit with 4.3 square feet of surface area. The primary heat exchanger 15 is supplied with refrigerant oil from the refrigerant oil reservoir 26. The temperature probe 14 is... ...J (6 inch) thermocouple with a compression fitting. The vacuum pump 17 is a liquid-ring, explosion-proof vacuum pump (1 HP Sihl brand model LEM 20) that performs 50 Torr at 5 inches Hg at 3500 RPM with 4 CFM. The vacuum pressure sensor 48 is a Omega Pressure Transmitter...

13/3K/3 (Item 3 from file: 349) [Links](#)

PCT FULLTEXT

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00294711

DIFFRACTION VIEWING DEVICE**DISPOSITIF DE VISUALISATION PAR DIFFRACTION****Patent Applicant/Patent Assignee:**

• MIKOH TECHNOLOGY LIMITED;

::

• DUELL Graham;

::

• BULLOCK Graeme;

::

• FLYNN Daphne;

::

• MARTINUZZO Steven;

::

• STENING Belinda;

::

• ATHERTON Peter Samuel;

::

	Country	Number	Kind	Date
Patent	WO	9512860	A1	19950511
Application	WO	94AU674		19941101
Priorities	AU	932200		19931105
	AU	932784		19931206
	AU	932785		19931206
	AU	946630		19940705
	AU	948124		19940915

Designated States: (All protection types applied unless otherwise stated - for applications 2004+)

Publication Language: English

Filing Language:

Fulltext word count: 2554

Detailed Description:

...shape, although it shou-, be appreciated that other cell shapes are possible. In such embodiments the elliptical spot 200 will preferably be such that the lengths of one or both of the axes of the ellipse are comparable with a characteristic dimension of the cells 201.

35 Figure 2 illustrates.... the elliptical spot 200 is aligned with the cells 201, and the length of the short axis of the ellipse is comparable with the side length of the square cells 201. Such a condition may be important in ensuring that cells from no more than one row or column are

Patent abs†

Set	Items	Description
S1	122	LONG()ELEMENT()METHOD OR LONG()ELEMENTS()METHOD OR LEM
S11	0	S1 AND (AU=(BALANIUK, R. OR BALANIUK, R OR COSTA, I. OR COSTA I OR SALISBURY, J. OR SALISBURY, J))

[File 347] JAPIO Dec 1976-2006/Sep(Updated 061230)

[File 350] Derwent WPIX 1963-2006/UD=200703

NPLabs†

Set	Items	Description
S1	1620	LONG()ELEMENT()METHOD OR LONG()ELEMENTS()METHOD OR LEM
S11	7	S1 AND (AU=(BALANIUK, R. OR BALANIUK, R OR COSTA, I. OR COSTA I OR SALISBURY, J. OR SALISBURY, J))

[File 8] Ei Compendex(R) 1970-2007/Dec W5

[File 35] Dissertation Abs Online 1861-2006/Nov

[File 65] Inside Conferences 1993-2007/Jan 11

[File 4] INSPEC 1983-2007/Dec W3

[File 94] JICST-EPlus 1985-2007/Jan W1

[File 6] NTIS 1964-2007/Jan W1

[File 144] Pascal 1973-2006/Dec W1

[File 34] SciSearch(R) Cited Ref Sci 1990-2007/Jan W1

[File 99] Wilson Appl. Sci & Tech Abs 1983-2007/Dec

[File 239] Mathsci 1940-2007/Feb

[File 56] Computer and Information Systems Abstracts 1966-2006/Dec

[File 57] Electronics & Communications Abstracts 1966-2006/Dec

[File 60] ANTE: Abstracts in New Tech & Engineer 1966-2006/Dec

[File 583] Gale Group Globalbase(TM) 1986-2002/Dec 13

11/9/1 (Item 1 from file: 8) Links

Fulltext available through: [SCIENCECIRECT](#)

Ei Compendex(R)

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08908441 E.I. No: EIP01416684059

Title: LEM - An approach for real time physically based soft tissue simulation

Author: Costa, I.F.; Balaniuk, R.

Corporate Source: SHARP/GRAVIR INRIA Rhone-Alpes, Le-Chesnay, France

Conference Title: 2001 IEEE International Conference on Robotics and Automation

Conference Location: Seoul, South Korea Conference Date: 20010521-20010526

Sponsor: IEEE

E.I. Conference No.: 58506

Source: Proceedings - IEEE International Conference on Robotics and Automation v 3 2001. p 2337-2343 (IEEE cat n 01CH37164)

Publication Year: 2001

CODEN: PIIAET ISSN: 1050-4729

Language: English

Document Type: CA; (Conference Article) Treatment: T; (Theoretical)

Journal Announcement: 0110W3

Abstract: This paper presents LEM - Long Elements Method, a new method for physically based simulation of deformable objects, suitable for real time animation and virtual environment interaction. The approach implements a static solution for elastic global deformations of objects filled with fluid based on the Pascal's principle and volume conservation. The volumes are discretised in long elements, defining meshes one order of magnitude smaller than tetrahedral or cubic meshes. The physics of the objects are modeled using bulk variables: pressure, density, volume and stress. No precalculations or condensations are needed. The approach is particularly interesting for soft tissue real time simulation and for graphic and haptic rendering. 13 Refs.

Descriptors: *Virtual reality; Deformation; Computer graphics; Animation; Image analysis ; Image segmentation; Finite element method; Computer simulation

Identifiers: Deformable objects

Classification Codes:

723.5 (Computer Applications); 742.1 (Photography); 723.2 (Data Processing); 921.6 (Numerical Methods)

723 (Computer Software, Data Handling & Applications); 742 (Cameras & Photography); 921 (Applied Mathematics)
72 (COMPUTERS & DATA PROCESSING); 74 (LIGHT & OPTICAL TECHNOLOGY) ; 92 (ENGINEERING
MATHEMATICS)

11/9/2 (Item 1 from file: 65) [Links](#)

Inside Conferences

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04471384 Inside Conference Item ID: CN046781454

Dynamic Simulation of Deformable Objects Using the Long Elements Method

Balaniuk, R.; Salisbury, K.

Conference: Symposium on haptic interfaces for virtual environment and teleoperator systems - 10th

SYMPOSIUM ON HAPTIC INTERFACES FOR VIRTUAL ENVIRONMENT AND TELEOPERATOR SYSTEMS , 2002;

10TH P: 58-65

IEEE, 2002

ISBN: 0769514898

Language: English **Document Type:** Conference Selected papers

Sponsor: IEEE

IEEE Computer Society

Location: Orlando, FL

2002; Mar (200203) (200203)

British Library Item Location: 8585.244908

Descriptors: haptic interfaces; virtual environment; teleoperator systems; IEEE ; haptics

11/9/3 (Item 2 from file: 65) [Links](#)

Inside Conferences

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04021723 Inside Conference Item ID: CN042267570

An Approach To LEM Modeling: Construction, Collision Detection and Dynamic Simulation

Sundaraj, K.; Laugier, C.; Costa, I.

Conference: Intelligent robots and systems - International conference

IEEE RSJ INTERNATIONAL CONFERENCE ON INTELLIGENT ROBOTS AND SYSTEMS , 2001; VOL 4 P: 2196-2201

IEEE, 2001

ISBN: 0780366123; 0780366131

Language: English **Document Type:** Conference Papers

Sponsor: IEEE

Location: Maui, HI

2001; Oct (200110) (200110)

British Library Item Location: 4363.062400

Note:

Also known as IROS 2001. IEEE cat no 01CH37180

Descriptors: IEEE; intelligent robots; IROS; robotics; intelligent systems

11/9/4 (Item 1 from file: 4) [Links](#)

INSPEC

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08403850 INSPEC Abstract Number: C2002-11-7330-225

Title: Soft-tissue simulation using LEM-Long Elements Method

Author: Balaniuk, R.

Author Affiliation: Dept. of Surg., Stanford Univ., CA, USA

Conference Title: Medicine Meets Virtual Reality 02/10. Digital Upgrades: Applying Moore's Law to Health p. 38-44

Editor(s): Westwood, J.D.; Hoffman, H.M.; Robb, R.A.; Stredney, D.

Publisher: IOS Press , Amsterdam, Netherlands

Publication Date: 2002 **Country of Publication:** Netherlands xii+600 pp.

ISBN: 1 58603 203 8 **Material Identity Number:** XX-2002-01963

Conference Title: Medicine Meets Virtual Reality 02/10. Digital Upgrades: Applying Moore's Law to Health

Conference Date: 23-26 Jan. 2002 **Conference Location:** Newport Beach, CA, USA

Language: English **Document Type:** Conference Paper (PA)

Treatment: Practical (P)

Abstract: This paper discusses the use of the **Long Elements Method-LEM** in soft tissue modeling and surgery simulation. The **LEM** is a new method for real time, physically based, dynamic simulation of deformable objects, based on a new meshing strategy, using long elements. The method uses a combination of static (state-less) and dynamic approaches to simulate deformations and dynamics, obtaining a higher degree of compliance per time step. Global deformations that conserve volume and are convincingly compliant are obtained. Models are defined using bulk material properties. Elastic and plastic deformations can be simulated. The real time performance of the method and its intrinsic properties of volume conservation, modeling based in material properties and simpler meshing make it particularly attractive for soft tissue modeling and surgery simulation. (8 Refs)

Subfile: C

Descriptors: medical computing; surgery; virtual reality

Identifiers: soft tissue modeling; surgery simulation; **Long Elements Method**; **LEM**; real time physically based dynamic simulation; deformable objects; meshing strategy; bulk material properties; real time performance; volume conservation;

material properties; meshing

Class Codes: C7330 (Biology and medical computing); C6130V (Virtual reality)

Copyright 2002, IEE

11/9/5 (Item 2 from file: 4) [Links](#)

INSPEC

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08254459 **INSPEC Abstract Number:** C2002-06-6130V-009

Title: Dynamic simulation of deformable objects using the Long Elements Method

Author: Balaniuk, R.; Salisbury, K.

Author Affiliation: Center for Adv. Technol. in Surg. at Stanford, Stanford Univ., CA, USA

Conference Title: Proceedings 10th Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems.

HAPTICS 2002 p. 58-65

Publisher: IEEE Comput. Soc , Los Alamitos, CA, USA

Publication Date: 2002 **Country of Publication:** USA ix+358 pp.

ISBN: 0 7695 1489 8 **Material Identity Number:** XX-2002-00930

U.S. Copyright Clearance Center Code: 0-7695-1489-8/02/\$17.00

Conference Title: Proceedings 10th Symposium on Haptic Interfaces for Virtual Environment and Teleoperator Systems.

HAPTICS 2002

Conference Sponsor: IEEE Comput. Soc

Conference Date: 24-25 March 2002 **Conference Location:** Orlando, FL, USA

Language: English **Document Type:** Conference Paper (PA)

Treatment: Theoretical (T)

Abstract: This paper presents the **Long Elements Method - LEM**, a new method for real time, physically based, dynamic simulation of deformable objects. The method is based on a new meshing strategy, using long elements. The number of elements per model is proportional to the square of the length of a side rather than its cube as in a standard meshing based in cubes or tetrahedra. The **LEM** uses an original combination of static (state-less) and dynamic approaches to simulate deformations and dynamics. Global deformations that conserve volume and are convincingly compliant are obtained. Models are defined using bulk material properties. The method is particularly attractive for soft tissue modeling. (10 Refs)

Subfile: C

Descriptors: finite element analysis; mesh generation; solid modelling; virtual reality

Identifiers: deformable objects; **Long Elements Method:** meshing strategy; soft tissue modeling; virtual deformable objects; virtual reality

Class Codes: C6130V (Virtual reality); C4185 (Finite element analysis); C4260 (Computational geometry); C6130B (Graphics techniques)

Copyright 2002, IEE

11/9/6 (Item 3 from file: 4) [Links](#)

INSPEC

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08012137 **INSPEC Abstract Number:** C2001-09-6130V-032

Title: LEM-an approach for real time physically based soft tissue simulation

Author: Costa, I.F.; Balaniuk, R.

Conference Title: Proceedings 2001 ICRA. IEEE International Conference on Robotics and Automation (Cat. No.01CH37164) Part vol.3 p. 2337-43 vol.3

Publisher: IEEE , Piscataway, NJ, USA

Publication Date: 2001 **Country of Publication:** USA 4 vol. xlxi+4261 pp.

ISBN: 0 7803 6576 3 **Material Identity Number:** XX-2001-01386

U.S. Copyright Clearance Center Code: 0 7803 6576 3/2001/\$10.00

Conference Title: Proceedings 2001 ICRA. IEEE International Conference on Robotics and Automation

Conference Sponsor: IEEE Robotics & Autom. Soc

Conference Date: 21-26 May 2001 **Conference Location:** Seoul, South Korea

Language: English **Document Type:** Conference Paper (PA)

Treatment: Theoretical (T); Experimental (X)

Abstract: This paper presents **LEM (long elements method)**, a new method for physically based simulation of deformable objects, suitable for real time animation and virtual environment interaction. The approach implements a static solution for elastic global deformations of objects filled with fluid based on the Pascal's principle and volume conservation. The volumes are discretised in long elements, defining meshes one order of magnitude smaller than tetrahedral or cubic meshes. The physics of the objects are modeled using bulk variables: pressure, density, volume and stress. No pre-calculations or condensations are needed. The approach is particularly interesting for soft tissue real time simulation and for graphic and haptic rendering. (13 Refs)

Subfile: C

Descriptors: computer animation; digital simulation; haptic interfaces; real-time systems; rendering (computer graphics); virtual reality

Identifiers: long elements method; deformable objects; real time systems; animation; virtual reality; Pascal principle; volume conservation; soft tissue simulation

Class Codes: C6130V (Virtual reality); C6185 (Simulation techniques); C6130B (Graphics techniques); C6180 (User interfaces)

Copyright 2001, IEE

11/9/7 (Item 1 from file: 56) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCECIRECT](#)

Computer and Information Systems Abstracts

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0000364414 IP Accession No: 567113

LEM - An approach for real time physically based soft tissue simulation

Costa, I F; Balaniuk, R SHARP/GRAVIR INRIA Rhone-Alpes, Le-Chesnay, France

PROC IEEE INT CONF ROB AUTOM , v 3 , p 2337-2343 , 2001

Publication Date: 2001

Conference:

2001 IEEE International Conference on Robotics and Automation , Seoul , South Korea , 21-26 May 2001

Document Type: Conference Paper; Journal Article

Record Type: Abstract

Language: English

ISSN: 1050-4729

File Segment: Computer & Information Systems Abstracts

Abstract:

This paper presents **LEM - Long Elements Method**, a new method for physically based simulation of deformable objects, suitable for real time animation and virtual environment interaction. The approach implements a static solution for elastic global deformations of objects filled with fluid based on the Pascal's principle and volume conservation. The volumes are discretised in long elements, defining meshes one order of magnitude smaller titan tetrahedral or cubic meshes. The physics of the objects are modeled using bulk variables: pressure, density, volume and stress. No precalculations or condensations are needed. The approach is particularly interesting for soft tissue real time simulation and for graphic and haptic rendering.

Descriptors: Deformation; Computer graphics; Animation; Image analysis; Image segmentation; Finite element method; Computer simulation

Identifiers: Deformable objects

Subj Catg: C 723, Computer Software, Data Handling and Applications; C 723.5, Computer Applications; C 742.1, Photography; C 723.2, Data Processing; C 921.6, Numerical Methods

Set	Items	Description
S1	0	LONG()ELEMENT()METHOD OR LONG()ELEMENTS()METHOD
S2	1150145	(SQUARE OR SQUARED OR SQUARING OR (MULTIPLY OR MULTIPLYING OR MULTIPLIED)(2W)(SELF OR ITSELF))
S3	0	S1(100N)S2
S4	93	S S2(100N)LEM
S5	36	S S4 NOT PY=2002:2007
S6	33	RD (unique items)
S7	33	SORT S6/ALL/PY {none of the "LEM" referred to long element method}

- [File 275] **Gale Group Computer DB(TM)** 1983-2007/Jan 09
- [File 621] **Gale Group New Prod.Annou.(R)** 1985-2007/Jan 04
- [File 636] **Gale Group Newsletter DB(TM)** 1987-2007/Jan 09
- [File 16] **Gale Group PROMT(R)** 1990-2007/Jan 09
- [File 160] **Gale Group PROMT(R)** 1972-1989
- [File 148] **Gale Group Trade & Industry DB** 1976-2007/Jan 05
- [File 624] **McGraw-Hill Publications** 1985-2007/Jan 12
- [File 15] **ABI/Inform(R)** 1971-2007/Jan 11
- [File 647] **CMP Computer Fulltext** 1988-2007/Mar W2
- [File 674] **Computer News Fulltext** 1989-2006/Sep W1

Set	Items	Description
S1	1620	LONG()ELEMENT()METHOD OR LONG()ELEMENTS()METHOD OR LEM
S2	630423	(SQUARE OR SQUARED OR SQUARING OR (MULTIPLY OR MULTIPLYING OR MULTIPLIED)(2W)(SELF OR ITSELF))
S3	12368407	(LENGTH? ? OR SPAN? ? OR SPAN? ? OR INTERVAL? ? OR UNIT? ? OR WIDTH? ? OR DIAMETER? ? OR SIZE? ? OR DIMENSION? ? OR HEIGHT? ? OR MEASUREMENT? ?)
S4	3912153	(SIDE OR EDGE OR DIRECTION OR BORDER OR FACE OR FRONT OR SEGMENT OR PERIMETER OR LATERAL OR HORIZONTAL)
S5	36821	S2(5N)S3
S6	1	S1 AND S5
S7	9519	S2(5N)S4
S8	1	S1 AND S7
S9	1453	S2(5N)(S3(5N)S4)
S10	1	S1 AND S9
S12	0	S S6 NOT PY=2002:2007
S13	2772507	S 8 NOT PY=2002:2007
S14	0	S S8 NOT PY=2002:2007
S15	0	S S10 NOT PY=2002:2007
S16	22	S S1 AND S2
S17	4	S S16 NOT PY=2002:2007
S18	4	RD (unique items)
S19	4	SORT S18/ALL/PY

- [File 8] **Ei Compendex(R)** 1970-2007/Dec W5
- [File 35] **Dissertation Abs Online** 1861-2006/Nov
- [File 65] **Inside Conferences** 1993-2007/Jan 11
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- [File 144] **Pascal** 1973-2006/Dec W1
- [File 34] **SciSearch(R) Cited Ref Sci** 1990-2007/Jan W1
- [File 99] **Wilson Appl. Sci & Tech Abs** 1983-2007/Dec
- [File 239] **Mathsci** 1940-2007/Feb
- [File 56] **Computer and Information Systems Abstracts** 1966-2006/Dec
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Subject summary

19/5,K/1 (Item 1 from file: 8) [Links](#)

Ei Compendex(R)

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03199956 E.I. Monthly No: EI72X003400

Title: Application of statistical techniques to landmark navigation.

Author: BENNETT, J. E.; HUNG, J. C.

Source: Navigation v 17 n 4 Winter 1970-1971 p 349-57

Publication Year: 1970

Language: ENGLISH

Journal Announcement: 72X0

Abstract: Statistical methods for improving the accuracy of landmark navigation are presented, including sample mean, least square regression and Kalman filtering, in connection with the Lunar Roving Vehicle (LRV). All the measurements involve only angle measurements which require equipment that is simpler and lighter than a ranging equipment. Two assumptions are made, the position of each landmark is known with respect to a given lunar coordinate system, and, only an angle measuring device is used. Because of the simplicity of the equipment the scheme can be used to guide astronauts to walk back to LEM in case the LRV is disabled. 5 refs.

Descriptors: *SPACE VEHICLES-*Lunar Landing; NAVIGATION; STATISTICAL METHODS

Identifiers: LUNAR ROVING VEHICLES

Classification Codes:

655 (Spacecraft); 922 (Statistical Methods)

65 (AEROSPACE ENGINEERING); 92 (ENGINEERING MATHEMATICS)

Abstract: Statistical methods for improving the accuracy of landmark navigation are presented, including sample mean, least square regression and Kalman filtering, in connection with the Lunar Roving Vehicle (LRV). All the measurements involve only angle measurements which require equipment that is simpler... ...an angle measuring device is used. Because of the simplicity of the equipment the scheme can be used to guide astronauts to walk back to LEM in case the LRV is disabled. 5 refs.

19/5,K/2 (Item 2 from file: 4) [Links](#)

Fulltext available through: [USPTO Full Text Retrieval Options](#) [SCIENCECIRECT](#)

INSPEC

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03441407 INSPEC Abstract Number: C85023040

Title: Analysis of maneuvering motion of a fishing boat by a digital autopilot

Author Karasuno, K.; Kawashima, S.; Yui, K.

Journal: Journal of Japan Institute of Navigation vol.71 p. 23-8

Publication Date: Sept. 1984 Country of Publication: Japan

CODEN: NKGRDR ISSN: 0388-7405

Language: Japanese Document Type: Journal Paper (JP)

Treatment: Applications (A); Theoretical (T)

Abstract: Describes the test results of online and real-time analysis of maneuvering motion of a fishing boat by a digital autopilot. The analysis due to a model reference adaptive system (MRAS) method, which is implemented in the digital autopilot, is compared with those due to the linear equation method (LEM) and least square method (LSM) which are usually used. The conclusions are: (1) the Nomoto's steering qualities indices T and K obtained by MRAS, are much coincident with those obtained by LSM for 5 deg. or 10 deg. zig-zag maneuvering tests; and (2) ship maneuvering motion of 5 deg. zig-zag tests are simulated with respect to T and K and estimated by analysis methods, and they are found to be similar to each other, in spite of differences in T and K according to the method of analysis. (2 Refs)

Subfile: C

Descriptors: computerised navigation; model reference adaptive control systems; ships

Identifiers: fishing boat; digital autopilot; maneuvering motion; model reference adaptive system; MRAS; linear equation method; least square method; Nomoto's steering qualities indices; zig-zag

Class Codes: C1340E (Self-adjusting systems); C3360J (Marine-systems)

Abstract: ...to a model reference adaptive system (MRAS) method, which is implemented in the digital autopilot, is compared with those due to the linear equation method (LEM) and least square method (LSM) which are usually used. The conclusions are: (1) the Nomoto's steering qualities indices T and K obtained by MRAS, are much coincident...

Identifiers: ...least square method...

19/5,K/3 (Item 3 from file: 239) [Links](#)

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Mathsci

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01921501 MR 86i#03005

Quadratum auctum.

Englebretsen, George

Logique et Anal. (N.S.)

Logique et Analyse. Nouvelle Serie , 1984 , 27 , no. 107, 309–325. ISSN: 0024-5836 CODEN: LOANAM

Language: English

Document Type: Journal

Journal Announcement: 1708

Subfile: MR (Mathematical Reviews) AMS

Abstract Length: LONG (27 lines)

The author presents an augmented square of opposition (quadratum auctum) in which the forms \$A\$: No \$\$\$ is not \$\$P\$, and \$a\$: All \$\$\$ is \$P\$ (and similarly \$E\$: No \$\$\$ is \$P\$, and \$e\$: Every \$\$\$ is non-\$P\$) are distinguished. He claims that the sources of these distinctions are the possibility of nonexistence of \$\$\$ and of either the inappropriateness or the indeterminacy of the application of \$P\$ to \$\$\$ (which he subsumes under the epithet "vacuousness"). In consequence, the laws governing the augmented square are (with his names):

LEM: Either \$A\$ or \$O\$ (and either \$E\$ or \$I\$) is true;

LNC: \$A\$ and \$O\$ (and \$E\$ and \$I\$) are not both true;

LQO: \$I\$ and \$e\$ (and \$O\$ and \$a\$) are not both true;

LIC: \$I\$ and \$O\$ (and \$a\$ and \$e\$) are not both true.

The square will collapse into the traditional square if

PLEM: Either \$I\$ or \$O\$ (and either \$a\$ or \$e\$) is true

holds, and if so, \$A\$ and \$a\$ (and \$E\$ and \$e\$) are identical. The square collapses, if we know that the subject is singular, into a singular square in which \$I\$ and \$a\$ (and \$O\$ and \$e\$) are identical. Indeed, if we know that the subject is both singular and not vacuous, then \$A\$, \$I\$ and \$a\$ (and \$E\$, \$O\$ and \$e\$) are equivalent, and we are left with a single line.

Finally, the author maps propositional logic onto the square, thereby revealing the connection between one material implication paradox and the belief that universal propositions with vacuous subject are true. In the augmented square, however, the \$a\$- and \$e\$-forms (whether quantified or propositional) are undefined when vacuous.

Reviewer: Read, Stephen (St. Andrews)

Review Type: Signed review

Descriptors: * 03B10 -Mathematical logic and foundations-General logic-Pure first-order logic (including many-sorted logic) ; 03B99 -Mathematical logic and foundations-General logic-Topics not covered by other classifications in this subsection

The author presents an augmented square of opposition (quadratum auctum) in which the forms \$A\$: No \$\$\$ is not \$\$P\$, and \$a\$: All \$\$\$ is \$P\$ (and similarly \$E\$: No \$\$\$ is \$P\$, ... inappropriateness or the indeterminacy of the application of \$P\$ to \$\$\$ (which he subsumes under the epithet "vacuousness"). In consequence, the laws governing the augmented square are (with his names):

LEM: Either \$A\$ or \$O\$ (and either \$E\$ or \$I\$) is true;

LIC: \$I\$ and \$O\$ (and \$a\$ and \$e\$) are not both true.

The square will collapse into the traditional square if

PLEM: Either \$I\$ or \$O\$ (and either \$a\$ or \$e\$) is true

holds, and if so, \$A\$ and \$a\$ (and \$E\$ and \$e\$) are identical. The square collapses, if we know that the subject is singular, into a singular square in which \$I\$ and \$a\$ (and \$O\$ and \$e\$) are identical. Indeed, if we know that the subject is both singular and not vacuous, then... ...and \$a\$ (and \$E\$, \$O\$ and \$e\$) are equivalent, and we are left with a single line.

Finally, the author maps propositional logic onto the square, thereby revealing the connection between one material implication paradox and the belief that universal propositions with vacuous subject are true. In the augmented square, however, the \$a\$- and \$e\$-forms (whether quantified or propositional) are undefined when vacuous.

19/5,K/4 (Item 4 from file: 4) [Links](#)

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INSPEC

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03513360 INSPEC Abstract Number: B85052457, C85040688

Title: Analysis of the maneuvering motions of a fishing boat by digital autopilot

Author Kawashima, S.; Yui, K.

Journal: JRC Review no.23 p. 4-9

Publication Date: 1985 Country of Publication: Japan

CODEN: NMGIDE ISSN: 0287-1564

Language: Japanese Document Type: Journal Paper (JP)

Treatment: Practical (P); Experimental (X)

Abstract: The analysis of the maneuvering motions of a ship is very important not only for safe navigation but also for autopilot design. Especially, the design of an adaptive autopilot with less rudder movements in varying sea conditions to ensure decreased fuel consumption requires an online, real-time analysis of maneuverability. The results of the online, real-time analysis made of a fishing boat's maneuvering motions using a digital autopilot are described. The maneuverability analysis by the Model Reference Adaptive System (MRAS) is compared with the analysis by the Linear Equation Method (LEM) and the Least Square Method (LSM) which have generally been used. (5 Refs)

Subfile: B C

Descriptors: adaptive systems; digital systems; navigation; ships

Identifiers: LEM; LSM; online analysis; maneuvering motions; fishing boat; digital autopilot; ship; navigation; sea conditions; fuel consumption; real-time analysis; Model Reference Adaptive System; MRAS; Linear Equation Method; Least Square Method

Class Codes: B6330 (Radionavigation and direction finding); C3360J (Marine-systems)

Abstract: ...a digital autopilot are described. The maneuverability analysis by the Model Reference Adaptive System (MRAS) is compared with the analysis by the Linear Equation Method (LEM) and the Least Square Method (LSM) which have generally been used.

Identifiers: LEM; ... Least Square Method



"long element method" 1980 - 2002 Search Ad
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Results 1 - 6 of 6 for "long element method". (0.44 seconds)

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[J Park](#)

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[K Sundaraj](#)

[C Mendoza](#)

[S Kim](#)

Tip: Try removing quotes from your search to get more results.

Faithfull Haptic Feedback in Medical Simulators

C Laugier, C Mendoza, K Sundaraj - 8 thInternational Symposium on Experimental Robotics, 2002 - iser02.unisa.it

... haptics. We currently use a new physical model LEM - **Long Element Method** as the simulation model. We ... group. 2.1 **Long Element Method** LEM ...

Cited by 4 - Related Articles - View as HTML - Web Search

Shape retaining chain linked model for real-time volume haptic rendering - group of 5 »

J Park, SY Kim, SW Son, DS Kwon, SK KAIST - Volume Visualization and Graphics, 2002. Proceedings. IEEE/ ..., 2002 - ieeexplore.ieee.org

... objects. Recently, Costa and Balaniuk [21] presented a new modeling method of deformable objects — the **Long Element Method** (LEM). ...

Cited by 7 - Related Articles - Web Search

A fast method to simulate virtual deformable objects with force feedback - group of 5 »

K Sundaraj, C Mendoza, C Laugier - Control, Automation, Robotics and Vision, 2002. ICARCV 2002. ..., 2002 - ieeexplore.ieee.org

Page 1. Seventh International Conference on Control, Automation, Robotics And Vision (ICARCV'02), Doe 2002, Singapore A Fast Method to Simulate Virtual ...

Cited by 2 - Related Articles - Web Search

Physically realistic simulation of large deformations using LEM for interactive applications - group of 2 »

K Sundaraj, C Laugier - Intelligent Robots and System, 2002. IEEE/RSJ International ..., 2002 - ieeexplore.ieee.org

Page 1 0-7803-7398-7117.00(02)002 IEEE 3054 Proceedings of the 2002 IEEE/RSJ Intl. Conference on Intelligent Robots and Systems EPFL ...

Cited by 1 - Related Articles - Web Search

Issues in Deformable Virtual Objects Simulation with Force Feedback - group of 3 »

C Mendoza, K Sundaraj, C Laugier - ... Advanced Robotics Program (IARP): International Workshop on ..., 2002 - vcg.isti.cnr.it

... method (FEM). Recently, our research work has brought us to the conception of a physical model : **Long Element Method** (LEM). We believe ...

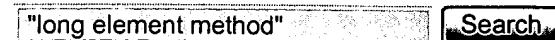
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Towards a Realistic Medical Simulator using Virtual Environments and Haptic Interaction - group of 8 »

C Laugier, C Mendoza, K Sundaraj - Proc. of the Int. Symp. on Robotics Research, Lome (AU), ..., 2001 - Springer

... spring networks which is more of a discrete object model, finite element method

(FEM) based on continuum mechanics and recently **long element method (LEM)** which ...
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I Costa

R Balaniuk

Tip: Try removing quotes from your search to get more results.

Static solution for real time deformable objects with fluid inside - group of 5 »

I Costa, R Balaniuk - ERCIM News, 2001 - ercim.org

... The **Long Elements Method (LEM)** is a new method for physically based simulation of deformable objects, suitable for real time animation and virtual environment ...

Cited by 9 - Related Articles - Cached - Web Search

LEM-an approach for real time physically based soft tissue simulation - group of 6 »

IF Costa, R Balaniuk - Robotics and Automation, 2001. Proceedings 2001 ICRA. IEEE ..., 2001 - ieeexplore.ieee.org

... edu Abstract This paper presents LEM - **Long Elements Method**, a new method for physically based simulation of de- formable objects ...

Cited by 12 - Related Articles - Web Search - BL Direct

[doc] Stanford Workshop on Surgical Simulation - group of 3 »

K Salisbury, TM Krummel, JC Latombe, R Balaniuk, ... - 2001 - ai.stanford.edu

... This paper presents LEM - **Long Elements Method**, a new method for physically based simulation of deformable objects, suitable for real time animation and ...

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[D Suter](#)
[H Edelsbrunner](#)

Did you mean: *lim* "square length"

Connectivity of random fault networks following a power law fault length distribution - group of 7 »

O Bour, P Davy - Water Resources Research, 1997 - fast.u-psud.fr
... Balberg et al. [1984] found also that the average of the **square length** provides much better results because it gives Figure 2. (a ...
Cited by 48 - [Related Articles](#) - [View as HTML](#) - [Web Search](#) - [BL Direct](#)

Computing Radius of Gyration Distributions for Reactor Populations of Highly Random-Branched ... - group of 2 »

PD Iedema, HCJ Hoefsloot - Macromolecular Theory and Simulations, 2001 - doi.wiley.com
... This prob- **lem** has been previously addressed employing MC sam- pling to generate ...
and is expressed in terms of the mean **square length** of the edges between units ...
Cited by 3 - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

Sand Erosion in Axial Flow Conditions - group of 3 »

I Vardoulakis, P Papanastasiou, M Stavropoulou - Transport in Porous Media, 2001 - Springer
... The physical permeability k has the dimensions of **square length** and is set to be a ... step, the discharge q is given by the boundary value prob- **lem**, Equations (16 ...
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Sand Erosion in Axial Flow Conditions

C our FAQ, R Zone - Transport in Porous Media, 2001 - ingentaconnect.com
... The physical permeability k has the dimensions of **square length** and is set to be a ... step, the discharge q is given by the boundary value prob- **lem**, Equations (16 ...
[Related Articles](#) - [Web Search](#)

Robust Optic Flow Computation - group of 8 »

A Bab-Hadiashar, D Suter - International Journal of Computer Vision, 1998 - Springer
... ill-posed. Various alternative strategies to make the problem well-posed (regularise the prob- **lem**) have been suggested. These include ...
Cited by 55 - [Related Articles](#) - [Web Search](#) - [BL Direct](#)

A Rotary Control of the Circular Cylinder Wake: An Analytic Approach - group of 3 »

MQ Xiao, M Novy, JH Myatt, S Banda - 1 st AIAA Flow Control Conference, Saint Louis, MO, 2002 - pdf.aiaa.org
... $E(u) = \frac{1}{2} \Omega u^2 dx$ (3.13) where $u = u_1 + u_2$ is the **square length** of vector function u . Another important quantity is the enstrophy $e(u) = 2 ...$
[Related Articles](#) - [Web Search](#)

Using Projection TO ACCELERATE Ray Tracing

A Bezerianos - 2001 - dgp.toronto.edu

... That directly translates into expensive ray-object intersection computations. To go around this prob- **lem** the idea of a bounding volume was introduced [Whi80]. ...
Related Articles - View as HTML - Web Search - Library Search

[book] Homogenization: In Memory of Serguei Kozlov

SM Kozlov, V Jikov, G Papanicolaou, VL ... - 1999 - books.google.com

Page 1. 1 Homogenization w Page 2. Serguei Kozlov (1954—1995) Page 3. Series on Advances in Mathematics for Applied Sciences — Vol. 50 Homogenization ...
Web Search - Library Search

[book] Geometry and Topology for Mesh Generation - group of 6 »

H Edelsbrunner - 2001 - books.google.com

... If x lies outside the circle, then $j_r j(x)$ is the **square length** of a tangent line segment connecting x with U . In any case, the power is positive outside the ...
Cited by 132 - Related Articles - Web Search - Library Search

[ps] Scope Classification: An Instance-Based Learning Algorithm with a Rule-Based Characterisation - group of 7 »

N Lachiche, P Marquis - European Conference on Machine Learning, 1998 - cs.bris.ac.uk

... voting is a variant where each example e is weighted by the **square length** of $C(o; e)$. Analytically, the space complexity of the search of $\text{cons}(T; ...)$
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Two-dimensional shape identification for the unsteady conduction problem - group of 2 »

R Korycki - Structural and Multidisciplinary Optimization, 2001 - Springer

Page 1. Struct Multidisc Optim 21, 229–238 Springer-Verlag 2001 Two-dimensional shape identification for the unsteady conduction problem R. Korycki ...

Cited by 2 - Related Articles - Web Search - BL Direct

Model and heuristic for a generalized access network design problem - group of 4 »

GR Mateus, RVL Franqueira - Telecommunication Systems, 2000 - Springer

... 1. Introduction This paper concentrates on a Generalized Access Network Design (GAND) prob- lem. We present a model and a heuristic. ...

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[M Ibnkahla](#)

Natural Gradient Works Efficiently in Learning - group of 11 »

S Amari - Neural Computation, 1998 - MIT Press

... However, when the coordinate system is nonorthonormal, the **squared length** is given by the quadratic ... 259 Item is called blind source deconvolution or equalization ...

Cited by 605 - Related Articles - Web Search - BL Direct

Learning mixtures of Gaussians - group of 21 »

S Dasgupta - Foundations of Computer Science, 1999. 40th Annual Symposium ..., 1999 - ieeexplore.ieee.org

... n 2 . The law of large numbers forces the distribution of this **squared length** to be ... The prob- Item is that one Gaussian may be responsible for the bulk of the ...

Cited by 104 - Related Articles - Web Search - Library Search - BL Direct

Magnification factors for the GTM algorithm - group of 10 »

CM Bishop, M Svensen, CKI Williams - Artificial Neural Networks, Fifth International Conference ..., 1997 - ieeexplore.ieee.org

... cho- sen to be two-dimensional so that the algorithm can be applied to the prob- lem of data ... Then the **squared length** el- ement in these coordinates is given by ...

Cited by 18 - Related Articles - Web Search - BL Direct

Interpreting and extending classical agglomerative clustering algorithms using a model-based ... - group of 10 »

SD Kamvar, D Klein, CD Manning - Proc. 19th Int. Conf. Machine Learning, 2002 - cs.berkeley.edu

... be an arc between a closest pair of points in C 1 × C 2 . The change in log J, which is log J, will then be the negative **squared length** between that pair. ...

Cited by 23 - Related Articles - View as HTML - Web Search - BL Direct

[PS] A kernel approach for learning from almost orthogonal patterns - group of 15 »

B Scholkopf, J Weston, E Eskin, C Leslie, WS Noble - Proceedings of the 13th European Conference on Machine ..., 2002 - cs.columbia.edu

... Note that the regularizer (6) equals the **squared length** of the weight vector w in H . One can show that k w k is inversely proportional to the margin of 4 We ...

Cited by 21 - Related Articles - View as HTML - Web Search - BL Direct

An information-geometrical method for improving the performance of support vector machine classifiers - group of 3 »

S Amari, S Wu - Artificial Neural Networks, 1999. ICANN 99. Ninth ..., 1999 - ieeexplore.ieee.org

... As a first step to this important prob- Item, we propose an information-geometrical method ... The **squared length** of dz = (dzcr) is written in the quadratic form as ...

Cited by 13 - Related Articles - Web Search - BL Direct

[book] Plane Answers to Complex Questions:: the Theory of Linear Models - group of 6 »

R Christensen - 2002 - books.google.com
 Page 1. SPRINGERT EXTS IN STAT I ST ICS Springer Page 2. Springer Texts in Statistics Advisors: George Casella Stephen Fienberg Ingram Olkin ...
[Cited by 100](#) - [Related Articles](#) - [Web Search](#) - [Library Search](#)

Curve finder combining perceptual grouping and a Kalman likefitting - group of 13 »

F Guichard, JP Tarel, A INRETS - Computer Vision, 1999. The Proceedings of the Seventh IEEE ... , 1999 - ieeexplore.ieee.org
 ... This allows, first, to use a recursive Kalman based fitting and, second, to cast the prob- lem as an optimal path search in an directed graph. ...
[Cited by 12](#) - [Related Articles](#) - [Web Search](#)

Correspondence analysis techniques - group of 3 »

J de Leeuw, G Michailidis, DY Wang - Multivariate analysis, design of experiments, and survey ... , 1999 - republika.pl
 ... R p , and Y j has the location of the k j category vertices of variable j, then the squared length of the n edges for variable j is ... lem. Then $PX = X$, (3a) ...
[Cited by 5](#) - [Related Articles](#) - [View as HTML](#) - [Web Search](#) - [BL Direct](#)

Numerically-robust adaptive subspace tracking using Householdertransformations - group of 5 »

SC Douglas - Sensor Array and Multichannel Signal Processing Workshop. ... , 2000 - ieeexplore.ieee.org
 ... through the matrix manifold described by (3). For the subspace tracking prob- lem, this manifold ... $\|VPSA(k)\| = \sqrt{C^T C}$ (12) 2 The squared length of vsA ...
[Cited by 6](#) - [Related Articles](#) - [Web Search](#)

Natural Gradient Works Efficiently in Learning

A Si - Neural Computation, 1998 - ingentaconnect.com
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